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LuMIN8™

Professional Sounder with Logo Illuminator



Model: Lumin8 Delta Plus with Integral Backlight RS402BL

Installation Instructions

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Introduction

RISCO Group's LuMIN8 Delta Plus External Sounder combines high performance and reliability with an exclusive design, making it the perfect finishing touch for your security installations.

LuMIN8 Delta Plus can be connected to any alarm system, or it can be installed on serial BUS of RISCO Group's Integrated Security System or GT series Control Panels.

When installed in BUS serial mode the LuMIN8 Delta Plus supports remote parameter setting and remote diagnostics, saving time and money on installation and maintenance and reducing repeat site visits.

Main Features

- Backlit to illuminate your logo
- Long life SLT strobe (patent pending)
- UV-treated vandal proof polycarbonate housing
- Double skin with internal metal cover (optional)
- SAB/SCB selectable
- Auto recharging battery circuit
- Double tamper protection (Wall & Cover)
- Remote and local engineer mode
- Flexible strobe activation when connected in serial mode
- Remote diagnostics and control when connected in serial mode
- Protection from power supply inverted connection
- Audible confirmation of set/unset

Installation

Warning:

The circuit board contained within the encapsulated module produces high voltages that may be present at the piezo head connections.

1. Open the screw cover located at the bottom of the sounder and unscrew the cover screw (see Figures 1 and 2).

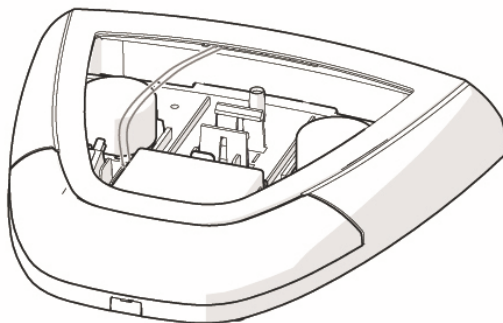


Figure 1

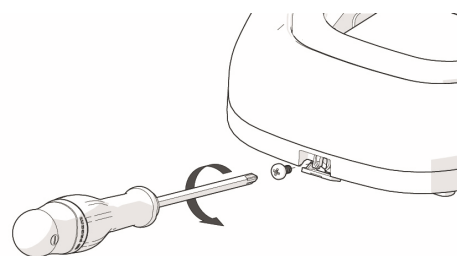


Figure 2

2. Push down on the backlight latch and open the internal cover (see Figure 3).
3. Retrieve the branded logo (see Figure 3).

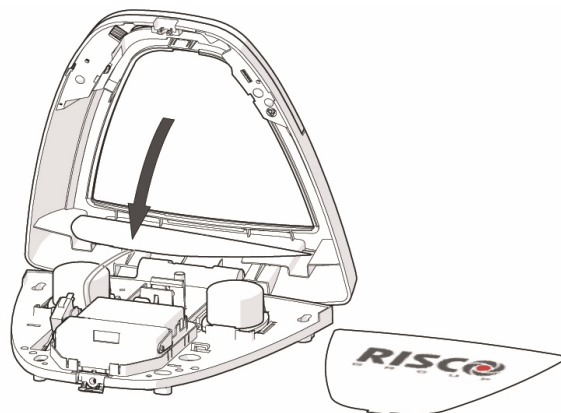


Figure 3

4. Insert the branded logo and then close the internal cover (see Figures 4 and 5).
5. Use the supplied stencil of the sounder as a template and mark the position for fixing the sounder.
6. Drill the holes and insert wall plugs.
7. Pull the connection cables through the back plate of the sounder (see Figure 5).

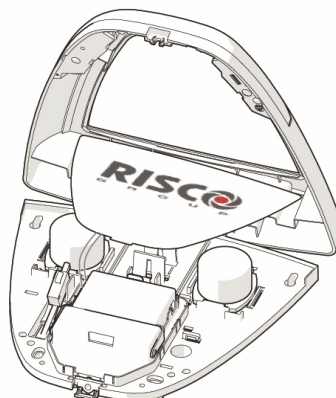


Figure 4

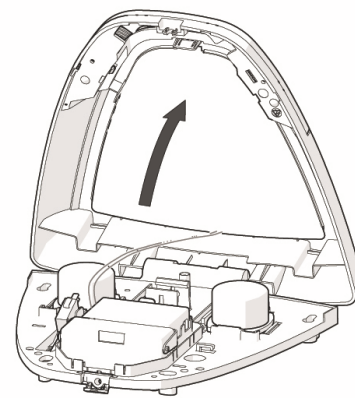


Figure 5

8. Screw the back plate of the sounder firmly to the mounting surface. Use three 2" No 10 screws.
9. Configure the dipswitches as required.
10. Open the terminal block cover and make the required connections to the terminal block.
11. Connect the battery for the backup power supply.

Note:

The sounder will sound for 4 seconds when the battery is connected.

12. Close the terminal block cover.
13. Close the sounder cover (see Figure 6).
14. Tighten the screw and then close the screw cover (see Figures 7 and 8).



Figure 6

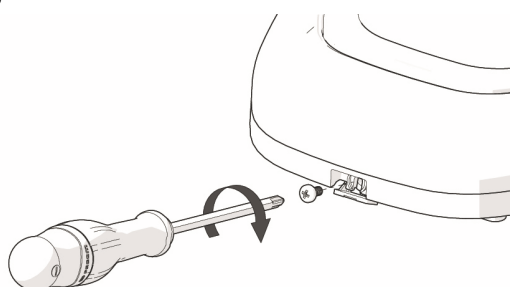


Figure 7



Figure 8

Recommended maximum cable distances (single sounder)

Cable Type	No of Cores	Distance SAB	Distance SCB
4 Core 7/0.2	1 x 0V ; 1 x 12V	35m(1PZ) / 25m(2PZ)	100m
6 Core 7/0.2	2 x 0V ; 2 x 12V	71m(1PZ) / 50m(2PZ)	300m

Note: (Health and Safety Advice)

The LuMIN8 Delta Plus sounders covered by this manual are capable of producing high volume sound. It is essential that suitable ear protection is worn when installing or testing the sounder.

Note:

For installation of the metal shroud follow the instructions attached with the product.

Dipswitch Settings

Note:

All switches must be positioned before powering up.

SW	Description																																				
SW1: SCB/SAB	Used to select SAB or SCB mode for the sounder. ON (SCB): Current for the sounder will be drawn from the sounder's rechargeable battery. OFF (SAB): Current for the sounder will be drawn from the control panel.																																				
SW2-SW4: A1, A2, A3	The operation of the dipswitches varies according to the sounder operation mode (BUS or Stand Alone) as defined by SW5. <u>Stand Alone Mode (SW5 OFF):</u> SW2 (A1) Used to control the Sounder Current. ON: Low current mode. The sound output will be reduced to 105dB 150mA (1 piezo). OFF: Normal current mode. The sound output will be 111dB 350mA (1 piezo). SW3 (A2): Used to select the Sounder Sound. ON: Low Sweep tone OFF: High Sweep tone SW4 (A3): Used to define Engineer Maintenance Mode (2 options available). ON: The Engineer may disable the box tamper (built-in bell tamper ring) by removing the 12V+ for 3 seconds. This mode will be indicated by a single flashing LED. To return the sounder to the normal mode, remove the power for 10 seconds. OFF: Application of 12V to the SET+ input will place the sounder in Engineer Maintenance Mode. When in Engineer Mode, the sounder tamper signal is active. <u>BUS (Serial) Mode (SW5 ON):</u> SW2-SW4: Used to set a unique ID number for the sounder when connected in serial mode (RISCO or GT serial control panels). <table><tr><th>SW4 A3</th><th>SW3 A2</th><th>SW2 A1</th><th>ID</th></tr><tr><td>OFF</td><td>OFF</td><td>OFF</td><td>1</td></tr><tr><td>OFF</td><td>OFF</td><td>ON</td><td>2</td></tr><tr><td>OFF</td><td>ON</td><td>OFF</td><td>3</td></tr><tr><td>OFF</td><td>ON</td><td>ON</td><td>4</td></tr><tr><td>ON</td><td>OFF</td><td>OFF</td><td>5</td></tr><tr><td>ON</td><td>OFF</td><td>ON</td><td>6</td></tr><tr><td>ON</td><td>ON</td><td>OFF</td><td>7</td></tr><tr><td>ON</td><td>ON</td><td>ON</td><td>8</td></tr></table>	SW4 A3	SW3 A2	SW2 A1	ID	OFF	OFF	OFF	1	OFF	OFF	ON	2	OFF	ON	OFF	3	OFF	ON	ON	4	ON	OFF	OFF	5	ON	OFF	ON	6	ON	ON	OFF	7	ON	ON	ON	8
SW4 A3	SW3 A2	SW2 A1	ID																																		
OFF	OFF	OFF	1																																		
OFF	OFF	ON	2																																		
OFF	ON	OFF	3																																		
OFF	ON	ON	4																																		
ON	OFF	OFF	5																																		
ON	OFF	ON	6																																		
ON	ON	OFF	7																																		
ON	ON	ON	8																																		
SW5: BUS/STD	Defines the operation mode of the sounder. ON (BUS): BUS (Serial) mode. Use when connecting to RISCO or GT control panels. OFF (STD): Stand Alone mode.																																				

SW	Description
SW6: PRO/ACT	<u>Stand Alone Mode (SW5 OFF):</u> Select the triggering command that will activate the sounder. ON: Positive trigger OFF: Negative trigger <u>BUS (Serial) Mode (SW5 ON):</u> Defines the BUS protocol when SW5 is set to BUS. ON (PRO): Connection to RISCO control panel. OFF (ACT): Connection to GT (NovaActive) control panels.
SW7: MON/NM	Used to connect an internal 4K7 resistor to TRIG terminal (only used for Stand Alone mode). ON (MON): (Monitored) An internal 4K7 resistor is connected between the TRIG terminal and the HOLD – (0V) terminal. OFF (NM): Not monitored. No 4K7 resistor disconnected from TRIG and HOLD – (0V) terminals. Note: See Wiring detail for two bell boxes wired in Standard mode.
SW8: TMF/EXT	Use this switch to ease installation of tamper in stand alone mode ON (TMF): Connects the TMPF terminal to HOLD – (0V) OFF (EXT): TMPF terminal is open. Note: See Wiring detail for two bell boxes wired in standard mode.

Terminal Block Wiring

The following explains the various wiring and connection procedures that must be performed when wiring the sounder.

HOLD		ACT BUS		STB-	TMPF	FAULT	SET+	PRO BUS		LAMP
-	+	TRIG	TMPR					YEL	GRN	

Terminal	Description
HOLD +	The supply to this terminal is normally taken from the Bell+ of the control panel (depending on manufacturer) and provides the + hold off for the SAB/SCB function. When connected to the ProSYS BUS configuration, connect this terminal to the Bell+ terminal.
HOLD -	The negative supply to this terminal should be permanent as it is the - hold off for the SAB/SCB function. When connected to the RISCO BUS configuration, connect this terminal to the COM BLK terminal.
ACT BUS TRIG	<u>Stand Alone Mode (SW5 OFF):</u> Sounder Trigger terminal. Trigger options are, Unmonitored Negative Trigger, Unmonitored Positive Trigger, Monitored Negative Trigger and Monitored Positive Trigger (see section - <i>Sounder Trigger Connection</i>). If switch SW1 is set for SAB, power for the sounder provided by the 12V & 0V terminals. If switch SW1 is set for SCB, power for the sounder is provided by the on-board battery. <u>BUS (Serial) Mode (SW5 ON and SW6 OFF):</u> When used in Serial Mode this terminal will be used as a data input from the GT panel.

Terminal	Description	
ACT BUS TMPR	<u>Stand Alone Mode (SW5 OFF):</u> Negative Tamper Return to the GT (NovaActive) control panels.	<u>BUS (Serial) Mode (SW5 ON and SW6 OFF):</u> This terminal will be used as a data output to the GT panel.
STB -	<u>Stand Alone Mode (SW5 OFF):</u> Negative trigger terminal for the strobe light. Power for the strobe is provided by the Ni-MH battery.	<u>BUS (Serial) Mode (SW5 ON):</u> STB- connection is not required in Serial Mode.
TMPF	<u>Stand Alone Mode (SW5 OFF):</u> Link this terminal to 0V by setting SW8 to ON position.	<u>BUS (Serial) Mode (SW5 ON):</u> No connection required.
FAULT	<u>Stand Alone Mode (SW5 OFF):</u> Terminal will activate (0V low) for battery fault, low panel volts or Sounder Piezo Head Failure (also strobe flashes rapidly).	<u>BUS (Serial) Mode (SW5 ON):</u> No connection required.
SET +	<u>Stand Alone Mode (SW5 OFF):</u> A positive signal to this terminal will activate the Setting Confirmation Sound.	<u>BUS (Serial) Mode (SW5 ON):</u> No connection required.
PRO BUS YEL GRN	Connect these terminals in BUS mode configuration to the RISCO control panel. Connect point to point according to the indicated colours.	
LAMP	<u>Stand Alone Mode (SW5 OFF) or GT BUS Mode (SW5 ON and SW6OFF):</u> This terminal is for activating the external LAMP. The LAMP is activated when it is connected between LAMP and Hold -.	<u>BUS (Serial) Mode (SW5 and SW6 ON):</u> Lamp controlled from BUS, no connection required.

Sounder Trigger Connection - Stand Alone mode

- Monitored Trigger.

Sounder will sound and a tamper will be generated if the Trigger wire is disconnected.

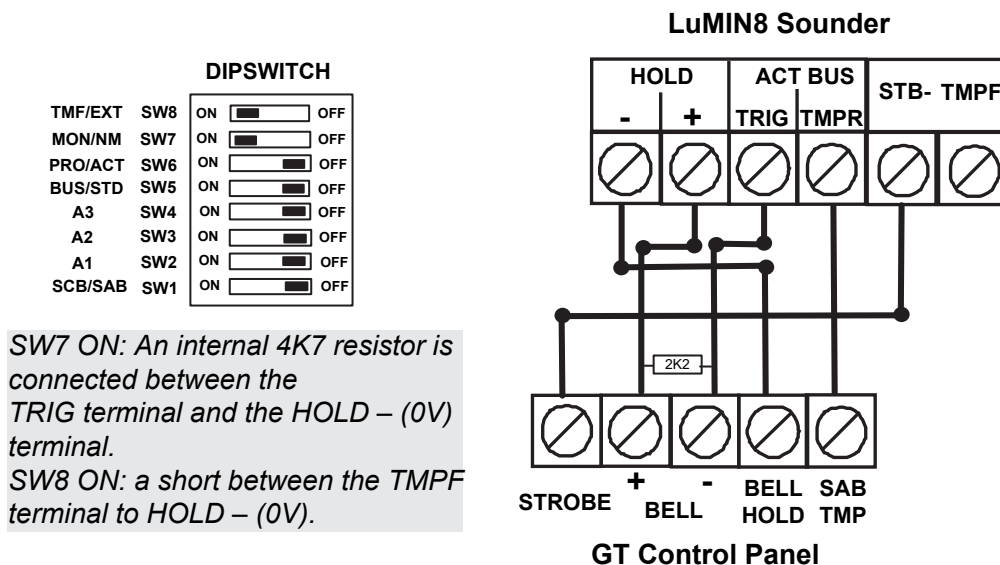
Note:

The sounder will recognise a valid trigger when the voltage level at the TRIG terminal is less than 2V (negative trigger) OR greater than 7V (positive trigger). A disconnected trigger wire will present a voltage of between 2V and 3.5V at the TRIG terminal. A healthy trigger wire connection (sounder not triggered) is a voltage greater than 3.5V for negative trigger, and less than 7V for positive trigger.

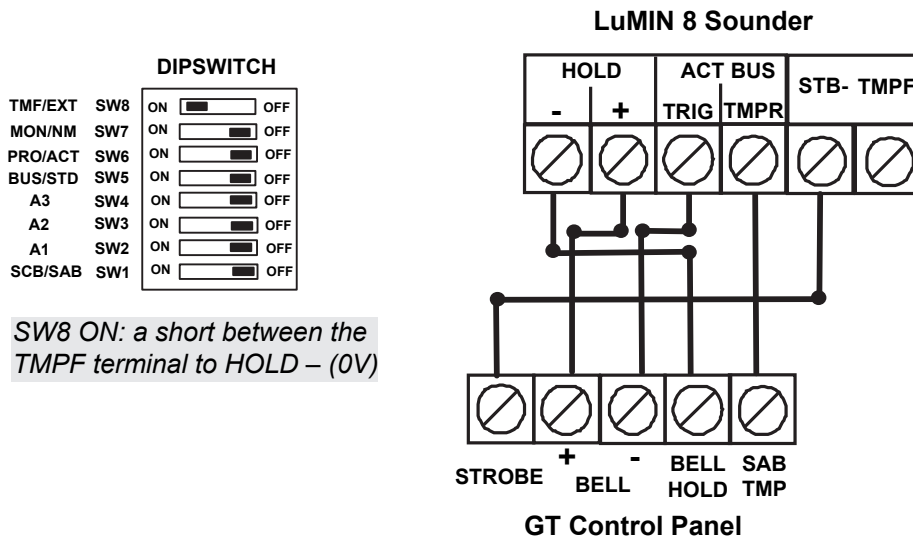
- Non Monitored Negative Trigger.
Switched Negative (BELL-) Trigger signal from Control Panel is wired directly to TRIG terminal on Sounder.
- Non Monitored Positive Trigger.
Switched 12V Positive Trigger signal from Control Panel is wired directly to TRIG terminal on Sounder.
- Monitored Negative Trigger.
GT Control Panels (or 3rd party equipment with a voltage free switched negative Bell trigger output):- On the Control Panel fit a 2K2 resistor between the Bell- output and the BELL+ terminal. For Control panels where the Trigger output switches between 12V and 0V, the 2K2 resistor is NOT required. On the Sounder set SW7 to **ON** (MON); this connects a 4K7 between the TRIG terminal and the 0V terminal. Connect Switched Negative (Bell-) Trigger signal from Control Panel to TRIG terminal on Sounder.
- Monitored Positive Trigger.

On the Control Panel fit a 1K resistor (or 2 x 2K2 resistors in parallel) between the Trigger positive terminal and 0V. On the Sounder set SW6 (+ve trigger select) and SW7 to **ON** (4K7 resistor between the TRIG terminal and the Hold – terminal). Connect Switched 12V Positive Trigger signal from Control Panel to TRIG terminal on Sounder.

Monitored Mode Wiring for GT Panels (Stand Alone Mode)



Non - Monitored Mode Wiring for GT Panels (Stand Alone Mode)



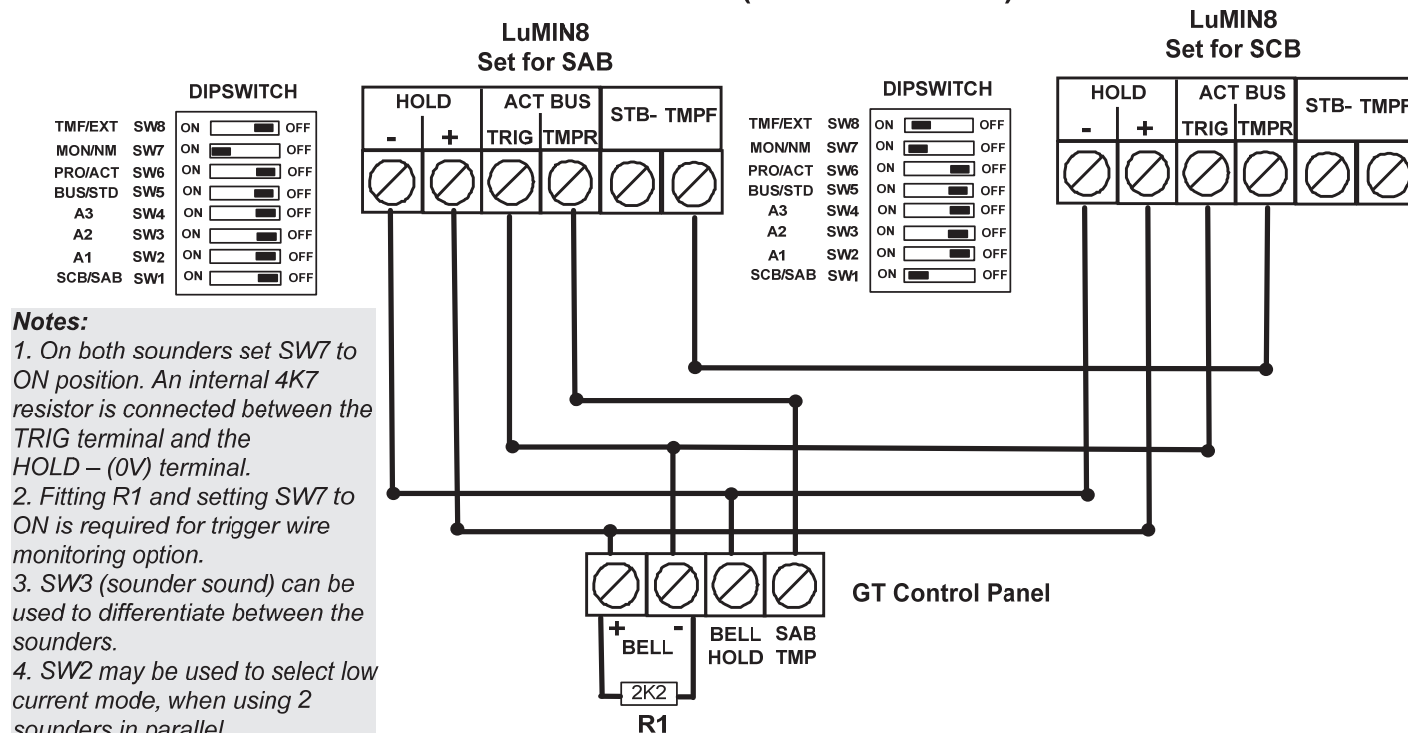
Sounder Trigger Connection - Stand Alone Mode to GT Control Panel, Parallel Mode

A maximum of 2 LuMIN8 Delta Plus sounders may be fitted to a single system. The illustration below is an example of a typical system using a maximum number of LuMIN8 Delta Plus sounders.

Note:

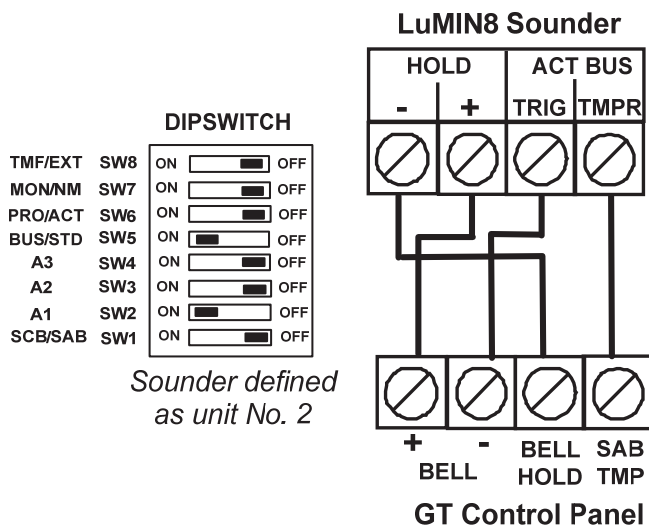
In the following illustration the maximum distance for the first sounder set to SAB using a 6 core cable is 35m for a single piezo or 25m for a twin piezo. The maximum distance for the second sounder set to SCB using a 6 core cable is 200m.

Wiring for 2 Monitored LuMIN8 connected to GT Panels (Stand Alone Mode)



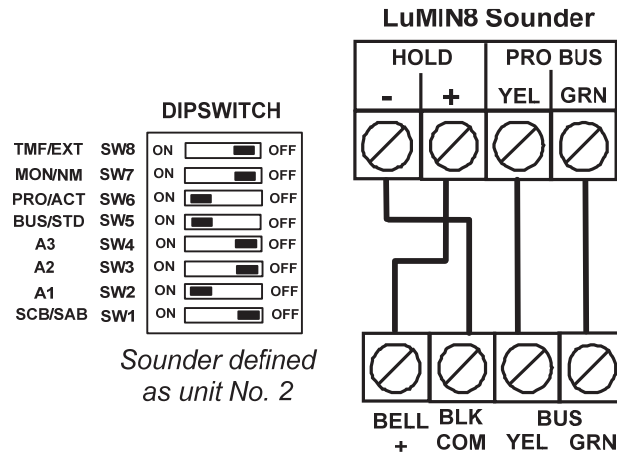
Sounder Trigger Connection - Serial Mode, GT Control panels

BUS (Serial) connection to GT panel



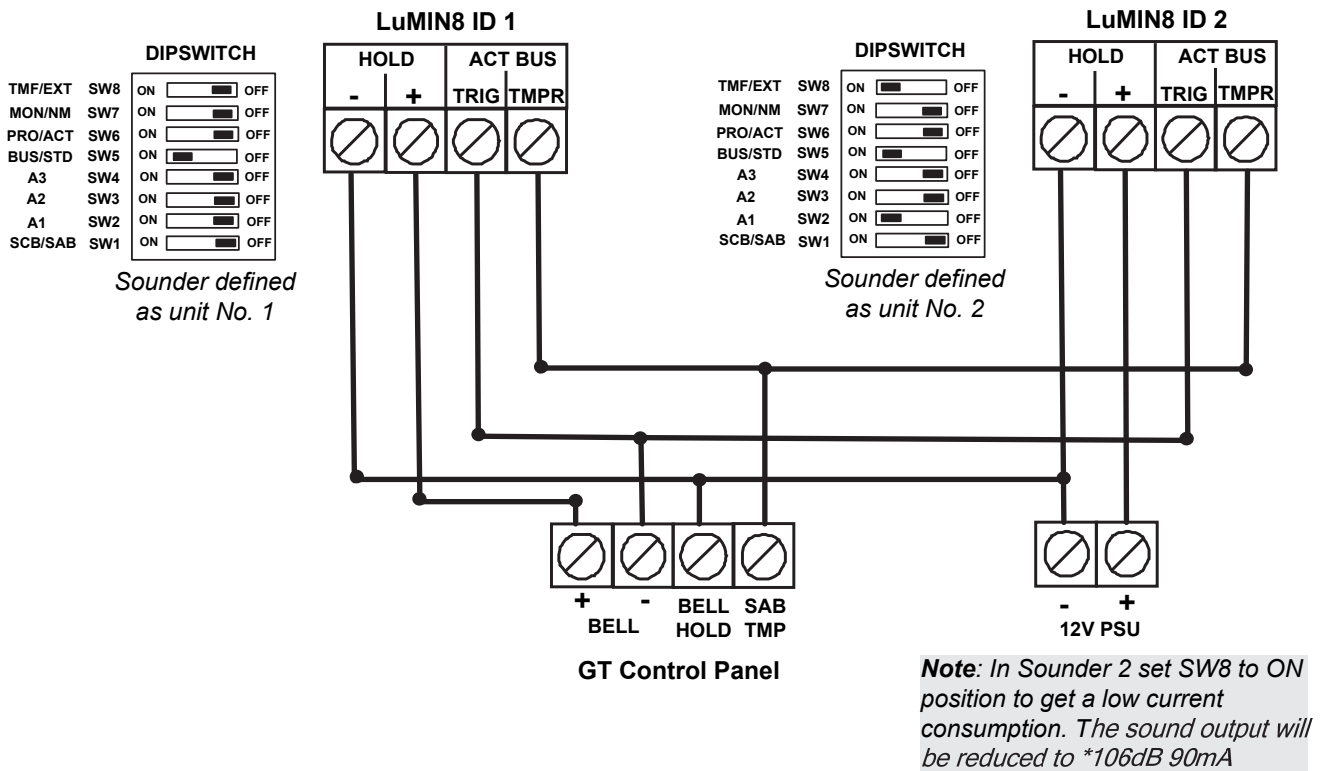
Sounder Trigger Connection - Serial Mode, RISCO Control Panel

BUS (Serial) connection to RISCO Control Panel



Sounder Trigger Connection - Serial Mode to GT Control Panel, Parallel Mode

2 Lumin8 Sounders connection to GT Panel in Serial mode using power supply for unit 2



Commissioning

Before powering the unit, ensure all dipswitches are in the required position. After the wiring has been completed the system should be powered up. Note that if the unit has a trigger (including tamper) it will sound for four seconds and then it will cut off (engineer test). The sounder may then only be re-triggered by clearing the original trigger (or tamper). This four second timer is only available at power up.

Notes:

1. Sounder cut-off time is 15 minutes unless the supply voltage is less than 13V when triggered the cut-off time is 5 minutes.
2. Strobe will flash at 1.25Hz unless the control panel appears to be running on battery; if so the strobe will flash once every 5 seconds.

Technical Specification

	Single Piezo	Twin Piezo
Input DC Power	Regulated 13.0- 14.2V	
Quiescent Current	23mA	23mA
Sounder current	350mA (Regulated)	450mA (Regulated)
Sounder current (Quiet mode)	150mA	180mA
Strobe current	10mA	10mA
Battery charging current	15mA	
Speaker Sound level	111dbA	114dbA
Strobe light	Surface Light Technology SMT LED	
Strobe lens	Polycarbonate, available in amber, red or blue	
Strobe flash rate	60 times per minute (maximum)	
Back-up battery (rechargeable)	Ni-MH rechargeable 8.4V, 280mA/h	
Ingress Protection	IP65 (For encapsulated PCB), IP44 (For other sounder components), IK 08	
Operating Temperature	-25°C to 60°C (-13°F to 158°F)	
Humidity	95% maximum	
Lumin8 Dimensions (W x L x H) Lumin8 Delta Plus Dimensions (W x L x H)	74mm x 273mm x 230mm 50mm x 277mm x 236mm	
Meets	EN50131-1 Grade 3 Environmental Class IV	

EMC Compliance Statement:

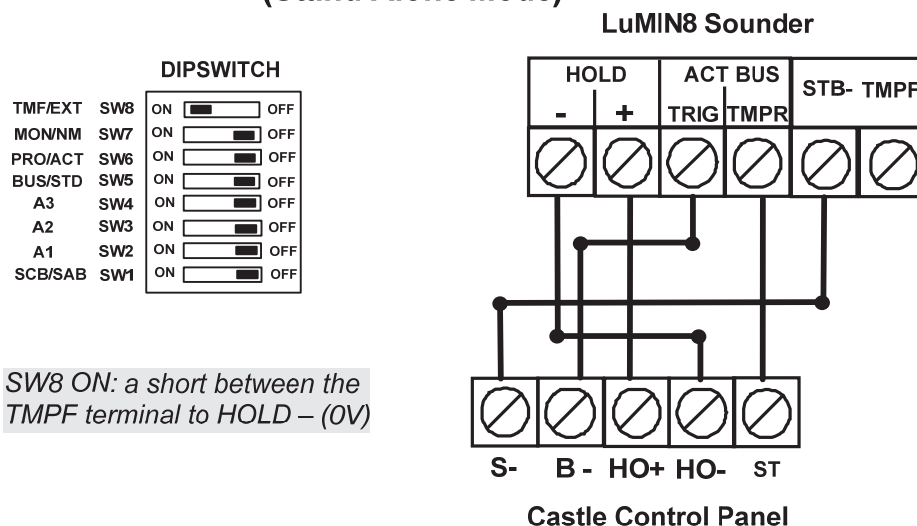
Hereby, RISCO Group declares that this equipment is in compliance with the essential requirements and other relevant provisions of Directive 2014/30/EU.

For the CE Declaration of Conformity please refer to our website: www.riscogroup.com

Appendix 1: Standard Terminal wiring to other control panels

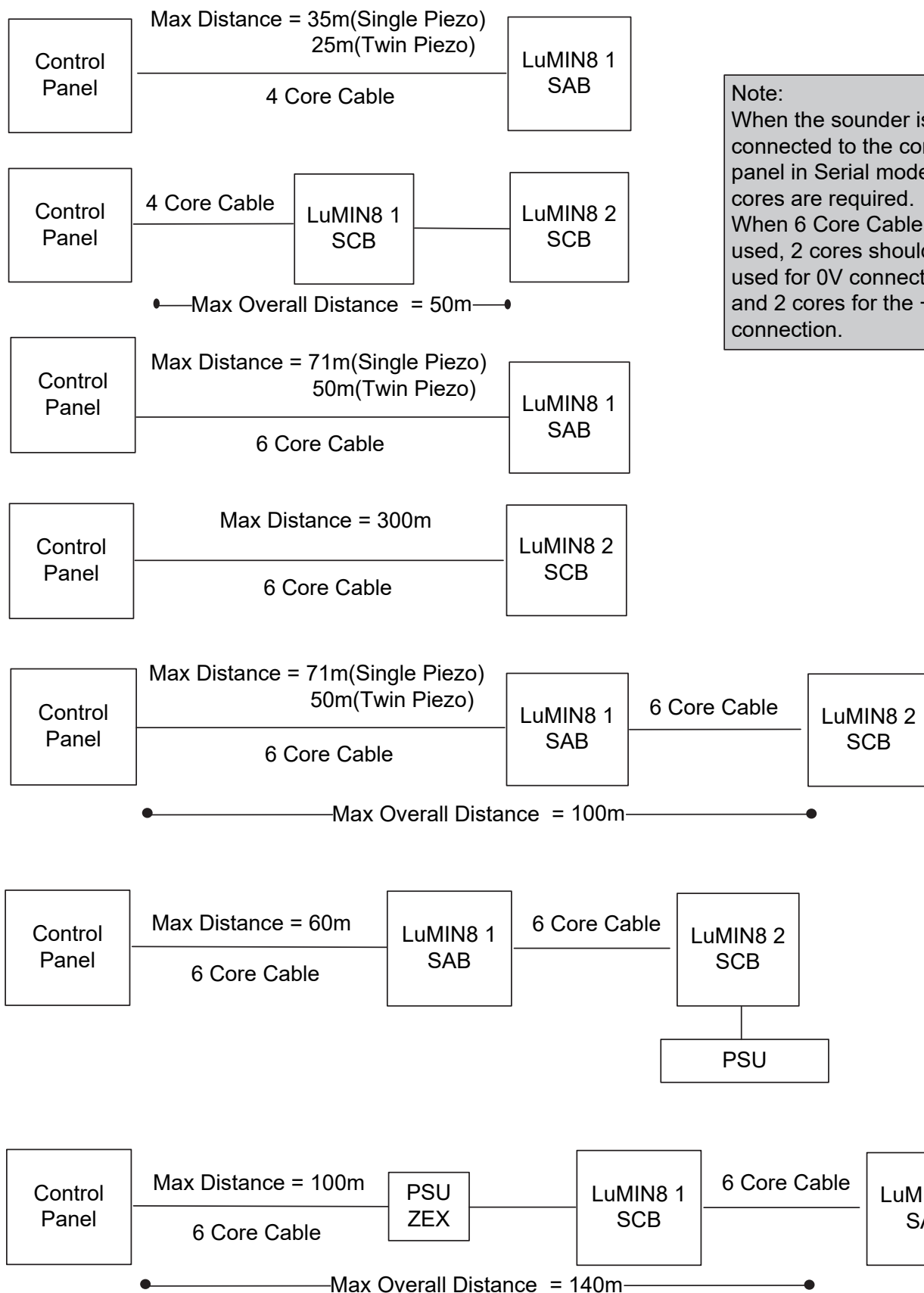
LuMIN8 Delta Plus	Hold -	Hold +	TRIG	TMPR	STB-
ADE Optima	A	D	B	T	Strobe-
Scantronic	0V	+12V	Bell	TR	STR
Menivier	HO-	HO+	Trig-	TR-	STB
Digital Audio (DA Systems)	0V	HD	BT	AT	ST
Pyronix	B-	B+	BA	BT	STB-
Texecom	D	A	B	C	S
A1(Omnicon)	SCB (0V)	Bell Siren+	Bell Siren -	SCB RT	Strobe-
Castle	HO-	HO+	B-	ST	S-
Ademco	Bell Tamp-	Bell +	Bell -	Bell Tamp -R	STRB

Non - Monitored Mode Wiring for Castle Panels (Stand Alone Mode)



Appendix 2: Recommended Cable Distances Using 7/0.2 Alarm Cable in Serial Mode

Standard 7/0.2 alarm cable gives some limitation to the distance that a sounder may be wired away from the control panel for reliable operation. To overcome this limitation increase the number of cores used for the 0V and 12V feed to the sounder.



Note:

When the sounder is connected to the control panel in Serial mode only 4 cores are required. When 6 Core Cable is used, 2 cores should be used for 0V connection and 2 cores for the +12V connection.

Standard Limited Product Warranty (“Limited Warranty”)

RISCO Ltd. (“RISCO”) guarantee RISCO’s hardware products (“Products”) to be free from defects in materials and workmanship when used and stored under normal conditions and in accordance with the instructions for use supplied by RISCO, for a period of (i) 24 months from the date of delivery of the Product (the “Warranty Period”). This Limited Warranty covers the Product only within the country where the Product was originally purchased and only covers Products purchased as new.

Contact with customers only. This Limited Warranty is solely for the benefit of customers who purchased the Products directly from RISCO or from an authorized distributor of RISCO. RISCO does not warrant the Product to consumers and nothing in this Warranty obligates RISCO to accept Product returns directly from end users who purchased the Products for their own use from RISCO’s customer or from any installer of RISCO, or otherwise provide warranty or other services to any such end user directly. RISCO’s authorized distributor or installer shall handle all interactions with its end users in connection with this Limited Warranty. RISCO’s authorized distributor or installer shall make no warranties, representations, guarantees or statements to its end users or other third parties that suggest that RISCO has any warranty or service obligation to, or any contractual privity with, any recipient of a Product.

Remedies. In the event that a material defect in a Product is discovered and reported to RISCO during the Warranty Period, RISCO shall accept return of the defective Product in accordance with the below RMA procedure and, at its option, either (i) repair or have repaired the defective Product, or (ii) provide a replacement product to the customer.

Return Material Authorization. In the event that you need to return your Product for repair or replacement, RISCO will provide you with a Return Merchandise Authorization Number (RMA#) as well as return instructions. Do not return your Product without prior approval from RISCO. Any Product returned without a valid, unique RMA# will be refused and returned to the sender at the sender’s expense. The returned Product must be accompanied with a detailed description of the defect discovered (“Defect Description”) and must otherwise follow RISCO’s then-current RMA procedure published in RISCO’s website at www.riscogroup.com in connection with any such return. If RISCO determines in its reasonable discretion that any Product returned by customer conforms to the applicable warranty (“Non-Defective Product”), RISCO will notify the customer of such determination and will return the applicable Product to customer at customer’s expense. In addition, RISCO may propose and assess customer a charge for testing and examination of Non-Defective Product.

Entire Liability. The repair or replacement of Products in accordance with this Limited Warranty shall be RISCO’s entire liability and customer’s sole and exclusive remedy in case a material defect in a Product is discovered and reported as required herein. RISCO’s obligation and this Limited Warranty are contingent upon the full payment by customer for such Product and upon a proven weekly testing and examination of the Product functionality.

Limitations. This Limited Warranty is the only warranty made by RISCO with respect to the Products. The warranty is not transferable to any third party. To the maximum extent permitted by applicable law, this Limited Warranty shall not apply and will be void if: (i) the conditions set forth above are not met (including, but not limited to, full payment by customer for the Product and a proven weekly testing and examination of the Product functionality); (ii) if the Products or any part or component thereof: (a) have been subjected to improper operation or installation; (b) have been subject to neglect, abuse, willful damage, abnormal working conditions, failure to follow RISCO’s instructions (whether oral or in writing); (c) have been misused, altered, modified or repaired without RISCO’s written approval or combined with, or installed on products, or equipment of the customer or of any third party; (d) have been damaged by any factor beyond RISCO’s reasonable control such as, but not limited to, power failure, electric power surges, or unsuitable third party components and the interaction of software therewith or (e) any failure or delay in the performance of the Product attributable to any means of communication provided by any third party service provider, including, but not limited to, GSM interruptions, lack of or internet outage and/or telephony failure. BATTERIES ARE EXPLICITLY EXCLUDED FROM THE WARRANTY AND RISCO SHALL NOT BE HELD RESPONSIBLE OR LIABLE IN RELATION THERETO, AND THE ONLY WARRANTY APPLICABLE THERETO, IF ANY, IS THE BATTERY MANUFACTURER’S WARRANTY. RISCO does not install or integrate the Product in the end user’s security system and is therefore not responsible for and cannot guarantee the performance of the end user’s security system which uses the Product or which the Product is a component of.

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WARNING: This product should be tested at least once a week.

Contacting RISCO Group

RISCO Group is committed to customer service and product support. You can contact us through our website www.riscogroup.com or as follows:

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